

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/001524

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7: C07C 255/46; C07C 255/44; C07C 255/45; C07D 277/02; C07D 277/20; C07D 277/30; A61K 31/426; A61P 19/00; A61P 19/00; A61P 19/08; A61P 19/10

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7: C07C; C07D; A61K; A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used):
Keywords: "cathepsin", "cysteine", "nitrile", "protease", "amide", "amido", Canadian Patent Database; PLUSPAT; STN-CAPLUS; ACS PUB, BIO MED CENTRAL; WEST; SCIRUS; DELPHION; EPO

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, Y	BIOORGANIC & MED. CHEM. LETT. (ROBICHAUD, ET AL) Vol. 14, Issue 16, pages 4291-4295, 16 AUG. 2004 see whole document	1-13
X	CA 2439415 (PRASIT, ET AL) 12 September 2002	1
Y	Claim 1, Scheme 1c, pages 54-55	2-13
Y	WO 0055125 (BRYANT, ET AL) 21 September 2000 Example 4, compound 69, page 68	1-13
P, X	US 20030232863 (BAYLY, ET AL) 18 December 2003 see whole document	1-13

Further documents are listed in the continuation of Box C[X].

- * Special categories of cited documents :
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

Patent family members are listed in annex[X].

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international-type search
17 November 2004 (17-11-2004)

Date of mailing of the international-type search report
14 January 2005 (14-01-2005)

Name and mailing address of the ISA/
Commissioner of Patents
Canadian Patent Office - PCT
Ottawa/Gatineau K1A 0C9
Facsimile No. 1-819-953-9358

Authorized officer
Okemona Oke (819) 956-4108

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/001524

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 0168645 (PALMER, ET AL) 20 September 2001 Examples 12, 13, 15	1-13
A	J. Med. Chem. (GREENSPAN, ET AL) Vol. 44, No. 26, pages 4524-4534, 2001 see whole document	1-13
A	J. Med. Chem. (WARD, ET AL) Vol. 45, No. 25, pages 5471-5482, 2002 see whole document, especially Tables 1-3	1-13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/CA2004/001524

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
CA 2439415 A	12.09.2002	US20040198982 A1 WO02069901 A2 EP1372655 A2	07-10-2004 12-09-2002 02-01-2004
WO 00 55125 A	08-03-2000	WO0055126 A3 US20030119788 A1 US20030096796 A1 US20020086996 A1 US6593327 B1 US6476026 B1 US6455502 B1 TR0201874 T2 ZA0107495 A SK0101288 A5 SI1178958 T1 PT1178958 T PL0350456 A1 TR0201874 T2 NO20014485 AO JP2002539192 T2 IL0145430 AO HU0200347 AB HR20010737 A1 EP1178958 A2 EP1452522 A2 EP1161415 A2 EE0100485 A DK1178958 T3 DE60008369 C0 CZ20013248 A3 CN1364155 T CN1362947 T CA2368148 AA CA2368122 AA BR0009043 A BG0106013 A BG0106003 A AU0774827 B2 AU0769736 B2 AU0037486 A5 AU0037461 A5 AT0259782 E	22-02-2001 26-06-2003 22-05-2003 04-07-2002 15-07-2003 05-11-2002 24-09-2002 21-10-2002 11-09-2002 04-04-2002 31-08-2004 30-07-2004 16-12-2002 21-10-2002 14-09-2001 19-11-2002 30-06-2002 29-06-2002 31-12-2002 13-02-2002 01-09-2004 12-12-2001 17-02-2003 21-06-2004 25-03-2004 17-04-2002 14-08-2002 07-08-2002 21-09-2000 21-09-2000 08-01-2002 31-05-2002 28-06-2002 08-07-2004 05-02-2004 04-10-2000 04-10-2000 15-03-2004
WO 01 68645 A	20-09-2001	WO0168645 A3 AU 0145764 A5	07-03-2003 24-09-2001
US 20030232863 A	18-12-2003	WO03075836 A3 WO03075836 A2	15-07-2004 18-12-2003

Best Available Copy

INTERNATIONAL SEARCH REPORTInternational application No.
PCT/CA2004/001524**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons :

1. Claims Nos. :
because they relate to subject matter not required to be searched by this Authority; namely:
2. Claims Nos.: 1 (**searched incompletely**)
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically :

The large number of theoretically conceivable compounds that can result from the combination and permutation of all the claimed substituents in claim 1 precludes a complete and comprehensive search. Claim 1 so lack support and the application so lack enabling disclosure that the scope of subject matter for which protection is sought cannot be delineated with certainty. The search has therefore been carried out for compounds which appear to be fully supported and disclosed, namely, compounds that are structurally similar to the examples, especially compounds according to the formula in claims 1-13 having the following attributes: R¹ and R² together form cycloalkyl; R³ and R⁴ are each alkyl optionally substituted by halo atoms; E and D are each phenyl, wherein together, they form biphenyl; and G is alkyl, cycloalkyl or alkylcycloalkyl.
3. Claims Nos. :
because they are dependant claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observation where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows :

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos. :
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. :

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.